## <u>CLAIMS</u>

## What is claimed is:

- 1 1. A method for deploying at least one cable into a conduit located within a well,
- 2 comprising:
- deploying a conduit within a well;
- 4 providing at least one cable;
- 5 passing at least portions of the at least one cable along the conduit; and
- 6 pulsing a fluid along the conduit to intermittently force the at least one cable along the
- 7 conduit.
- 1 2. The method of claim 1, wherein the fluid comprises a liquid.
- 1 3. The method of claim 1, wherein the fluid comprises a gas.
- 1 4. The method of claim 3, wherein the gas is selected from the group consisting of nitrogen,
- 2 air, or a gas from the family of inert gases.
- 1 5. The method of claim 1, wherein the fluid comprises a combination of a fluid and a gas.
- 1 6. The method of claim 1, wherein the at least one cable is a fiber optic cable.
- 1 7. The method of claim 1, further comprising measuring at least one parameter of interest
- 2 within the well by use of the at least one cable.
- 1 8. The method of claim 7, wherein the measuring step comprises providing the at least one
- 2 cable with at least one measurement location along its length.
- 1 9. The method of claim 8, wherein the measuring step comprises providing the at least one
- 2 cable with a plurality of measurement locations distributed along its length.

- 1 10. The method of claim 7, wherein the parameter of interest measured is selected from the
- 2 group consisting of temperature, distributed temperature, pressure, acoustic energy, electric
- 3 current, magnetic field, electric field, flow, chemical properties, or a combination thereof.
- 1 11. The method of claim 1, wherein the pulsing step comprises pulsing the fluid at a lower
- 2 pressure and then at a higher pressure.
- 1 12. The method of claim 1, further comprising cleaning the interior of the conduit prior to
- 2 passing the at least one cable through the conduit.
- 1 13. The method of claim 1, further comprising drying the interior of the conduit prior to
- 2 passing the at least one cable through the conduit.
- 1 14. The method of claim 1, further comprising removing non-miscible fluids prior to pasting
- 2 the least one cable through the conduit.
- 1 15. The method of claim 1, further comprising passing a solvent through the conduit prior to
- 2 passing the at least one cable through the conduit.
- 1 16. The method of claim 15, further comprising, prior to the passing the solvent step, purging
- 2 any liquid present in the interior of the conduit by passing a gas through the conduit.
- 1 17. The method of claim 15, further comprising letting the solvent stand in the conduit for an
- 2 amount of time.
- 1 18. The method of claim 17, further comprising purging the solvent from the conduit by
- 2 passing a gas through the conduit.
- 1 19. The method of claim 1, further comprising, subsequent to the pulsing step, venting the
- 2 pressure found within the conduit.

- 1 20. The method of claim 1, further comprising, subsequent to the pulsing step, maintaining
- 2 the interior of the conduit at an elevated pressure.
- 1 21. The method of claim 20, wherein the elevated pressure is higher than the pressure
- 2 external to the conduit.

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- 1 22. The method of claim 21, wherein a different fluid is used during the pulsing step than
- 2 during the maintaining step.
- 1 23. The method of claim 1, wherein the pulsing step occurs after the deploying step.
- 1 24. The method of claim 1, wherein the pulsing step occurs prior to the deploying step.
- 1 25. The method of claim 24, further comprising maintaining the interior of the conduit at an
- 2 elevated pressure at least during the deploying step.
- 1 26. A system used to deploy a cable into a conduit located within a well, comprising:
- a conduit adapted to be located within a well;
- at least one cable adapted to be disposed within the conduit; and
- an installation unit connected to the conduit and including a fluid unit for pulsing a fluid
- 5 along the conduit to intermittently force the at least one cable along the conduit.
- 1 27. The system of claim 26, wherein the fluid comprises a liquid.
- 1 28. The system of claim 26, wherein the fluid comprises a gas.
- 1 29. The system of claim 28, wherein the gas is selected from the group consisting of
- 2 nitrogen, air, or a gas from the family of inert gases.
- 1 30. The system of claim 26, wherein the fluid comprises a combination of gas and liquid.

- 1 31. The system of claim 26, wherein the at least one cable is a fiber optic cable.
- 1 32. The system of claim 26, wherein the at least one cable is adapted to measure at least one
- 2 parameter of interest within the well.
- 1 33. The system of claim 32, wherein the at least one cable includes at least one parameter
- 2 measurement location along its length.
- 1 34. The system of claim 33, wherein the at least one cable includes a plurality of parameter
- 2 measurement locations distributed along its length.
- 1 35. The system of claim 32, wherein the parameter of interest measured is selected from the
- 2 group consisting of temperature, distributed temperature, pressure, acoustic energy, electric
- 3 current, magnetic field, electric field, flow, chemical properties, or a combination thereof.
- 1 36. The system of claim 32, further comprising an interrogation unit in communication with
- 2 the at least one cable for receiving signals representative of the measured parameter.
- 1 37. The system of claim 26, wherein the conduit has a U-shape so that a return line extends
- 2 from the well to the exterior of the well.
- 1 38. The system of claim 26, wherein pressure in the conduit is vented after the at least one
- 2 cable is deployed in the conduit.
- 1 39. The system of claim 26, wherein the fluid pulse is at a lower pressure and then at a higher
- 2 pressure.
- 1 40. The system of claim 26, wherein a solvent is deployed within the conduit prior to the
- 2 fluid being pulsed through the conduit.

- 1 41. The system of claim 26, wherein the conduit is cleaned prior to the at least one cable
- 2 being disposed in the conduit.
- 1 42. The system of claim 26, wherein the conduit is dried prior to the at least one cable being
- 2 disposed in the conduit.
- 1 43. The system of claim 26, wherein non-miscible fluids are removed from the conduit prior
- 2 to the at least one cable being disposed in the conduit.
- 1 44. The system of claim 26, wherein the interior of the conduit is maintained at an elevated
- 2 pressure.

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- 1 45. The system of claim 44, wherein the elevated pressure is higher than the pressure external
- 2 to the conduit.
- 1 46. The system of claim 44, wherein a different fluid is used for pulsing than for maintaining
- 2 an elevated pressure.
- 1 47. The system of claim 26, wherein the at least one cable is forced along the conduit when
- 2 the conduit is located in the well.
- 1 48. The system of claim 26, wherein the at least one cable is forced along the conduit prior to
- 2 the conduit being located in the well.
- 1 49. The system of claim 48, wherein the interior of the conduit is maintained at an elevated
- 2 pressure at least as the conduit is being located in the well.

- 1 50. A method for deploying at least one cable into a conduit, comprising:
- 2 providing at least one cable and a conduit;
- passing at least portions of the at least one cable along the conduit to a remote location;
- 4 pulsing a fluid along the conduit to intermittently force the at least one cable along the
- 5 conduit; and
- 6 measuring at least one parameter of interest at the remote location by use of the least one
- 7 cable.

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- 1 51. The method of claim 50, wherein the remote location comprises a pipeline.
- 1 52. The method of claim 50, wherein the remote location comprises a tunnel.
- 1 53. The method of claim 50, wherein the remote location comprises a power line.
- 1 54. The method of claim 50, wherein the fluid is selected from a fluid, a gas, or a
- 2 combination thereof.